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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,805	02/21/2002	William E. Ortyn	BIOL0038	2051

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EXAMINER

YANG, NELSON C

ART UNIT	PAPER NUMBER
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1641

MAIL DATE	DELIVERY MODE
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09/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/082,805

Applicant(s)

ORTYN ET AL.

Examiner

Nelson Yang

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34, 35, 37-40, 42-44, 46, 49-51, 54 and 56-61 is/are pending in the application.
- 4a) Of the above claim(s) 59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34, 35, 37-40, 42-44, 46, 49-51, 54, 56-58, 60-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment of claims 34, 39, 42, 50, 54, 56, 60 is acknowledged and has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 34, 35, 37-40, 42-44, 46, 49-51, 54, 56-58, 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Stern [US 5,981,956] in view of Faska et al. [US 2002/0008191].

With respect to claims 34, 42, 54, 56, 60, 61, Stern teaches an array comprising regions (features - column 7, lines 10-15) containing different polymer sequences to be coupled in different known locations on the substrate surface (object) (column 5, lines 48-60). Target sequences labeled with detectable groups (probes) are contacted with the array (column 6, lines 52-60), where multiple probes may be used (column 8, lines 25-30). Dichroic beam splitters are used to separate signals from label groups having different response radiation wavelengths, thereby allowing simultaneous detection of multiple fluorescent indicators, and thus simultaneous interrogation of a single array with multiple target sequences (column 10, lines 15-35), where the response radiation from the targets are individually detected through additional

Art Unit: 1641

detectors such as photomultiplier tubes (column 10, lines 33-50). Stern fails to teach the use of a single detector.

Faska et al., however, disclose the use of a semiconductor-based, photo detector capable of simultaneously detecting two or more selected wavelengths of light on a pixel registered basis (para. 0026). Faska et al. further disclose that the detector has the advantages of ease of fabrication and high yields, with maximum use of the area impinged upon the incoming light (para. 0017).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a single semiconductor-based, photo detector capable of simultaneously detecting two or more selected wavelengths of light on a pixel registered basis instead of the PMT detectors in the invention of Stern, as suggested by Faska et al., as Faska et al. disclose that the photodetectors are easily fabricated and allow for maximum use of the area impinged upon the incoming light, resulting in increased efficiency.

4. With respect to claims 35, 43, 57, Stern discloses that target sequences labeled with a detectable group (probes) are contacted with the array (column 6, lines 52-60), which would be specific and bind to a complementary sequence.
5. With respect to claims 37, 39, 51, Stern discloses the detection of relatively weak signals such as fluorescence, which would come from the labels (column 12, lines 35-40).
6. With respect to claims 38, 44, Stern discloses that the targets may include cells (column 4, lines 40-50).

Art Unit: 1641

7. With respect to claims 40, 46, 58, Stern teaches that multiple probes may be used (column 8, lines 25-30), where different labels bind to different locations, such that information based on the locations can be extracted (column 7, lines 35-45).

8. With respect to claims 49, Stern discloses that the labels may be fluorescent (column 10, lines 28-31).

9. With respect to claim 50, Faska et al. teach the use of a semiconductor-based, photo detector capable of simultaneously detecting two or more selected wavelengths of light on a pixel registered basis (para. 0026). Faska et al. further teach that the wavelengths are detected with perfect spatial registration of the selected wavelengths (para. 0015), wherein at least four color devices are practical in accordance with the invention (para. 0016). Therefore, multiple different spectral signatures can be differentiated, including those comprising AAAB, AAB, and ABBB.

Response to Arguments

10. Applicant's arguments with respect to claims 34, 35, 37-40, 42-44, 46, 49-51, 54, 56-58, 60-61 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. No claims are allowed.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1641

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571) 272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/082,805

Page 6

Art Unit: 1641

Nelson Yang
Patent Examiner
Art Unit 1641



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SUPERVISORY PATENT EXAMINER
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